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A.I.A. FILE NO. 37-C

OWENS-CORNING
FIBERGLAS
T.M. REG. U.S. PAT. OFF.

BUILDING INSULATIONS

PRODUCTS • PERFORMANCE • APPLICATION

A.I.A. FILE NO. 37-C

EDWARD SMOLA
17018 MILES AVENUE
CLEVELAND 28, OHIO

OWENS-CORNING FIBERGLAS

Wolfson
8"/ft foil outs
3"

2" - 3a

building insulations

9¢

99/100

do:

reduce fuel costs

An insulation investment is returned to the building owner in his first few heating seasons. Reduced fuel bills cancel the original cost and continue to pay the owner dividends for as long as he lives in the house. Initial cost of heating or cooling plants for homes may be reduced.

give winter comfort

Properly insulated homes are warmer in winter. While it is possible, though expensive, to maintain air at correct temperatures in an uninsulated house by running the furnace at peak capacity, walls and exposed floors and ceilings will still be cold. With adequate insulation, wall temperatures can be kept uniformly high enough to insure comfort.

keep homes cool in summer

Insulation retards heat flow until ventilation can take summer heat away. With enough insulation, and well vented attic spaces, buildings in any climate can be more comfortable in summer.

Sufficient insulation reduces the size of air conditioning equipment needed. And it can reduce operating costs appreciably.

meet every insulation need

There is a variety of efficient Fiberglas insulations. Batt or Roll Blankets, Utility Batts, Blowing Wool, Pouring Wool and Perimeter Insulation form a complete line to meet every building insulation need.

are:

permanent

Fiberglas* insulations resist rot, settling and odors, outlast most building materials.

easy to use

Stout nailing flange on batts and blankets speeds application . . . inch markings facilitate cutting. Applicators install blowing wool quickly . . . with no fuss or bother.

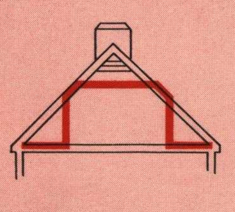
protection against condensation

Vapor barrier facing on Fiberglas batts and blankets has a permeance of 1 perm or less . . . gives positive condensation protection when properly installed.

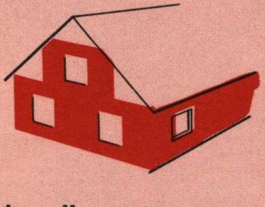
efficient

Low thermal conductivity values assure effective reduction of heat flow. "U" values of typical installations are given on page 5.

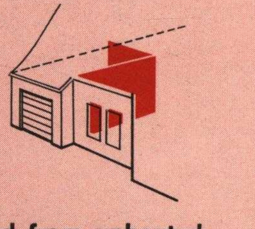
where to insulate



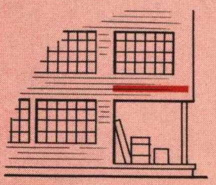
attics
Insulate attic floor or knee walls, slopes and ceilings with thickness adequate for comfort. Use vapor barrier on "warm-in-winter" side.



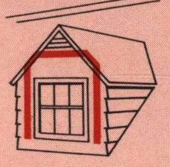
sidewalls
Completely insulate outside walls. Place vapor barrier toward the inner or "warm-in-winter" side of the wall to prevent condensation.



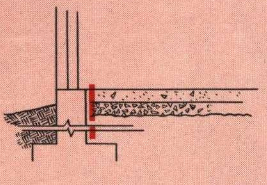
heated from unheated
Insulate heated spaces from unheated garages or storage spaces with the same care as the exterior walls to give comfort in all rooms.



floors over unheated areas Insulate floors of unheated porches or garages and over ventilated crawl spaces to prevent heat loss and cold, uncomfortable floors.



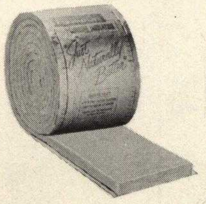
dormers
Insulate dormers with special care. Utility batts and pouring wool are easy to stuff. Insulate wall, ceiling and spaces around the window.



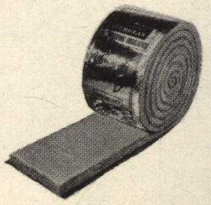
perimeter
Insulate the entire perimeter of the concrete floor slabs with Fiberglas perimeter insulation. Insulate inside the walls of crawl spaces.

FIBERGLAS

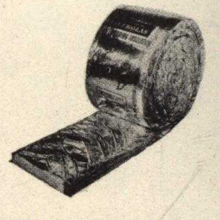
PRODUCT



STANDARD (kraft paper)

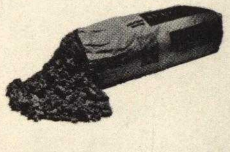


FOIL-FACED

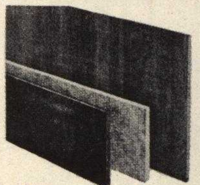


FOIL-ENCLOSED

POURING WOOL



BLOWING WOOL



PERIMETER INSULATION

*TM, Owens-Corning Fiberglas Corp.

INSULATION SELECTION and INFORMATION CHART

USES		NOMINAL THICKNESS	WIDTHS	PACKAGING
New Construction	Existing Construction			
attics sidewalls heated from unheated spaces floors over unheated areas dormers	attics	6″	15″, 23″	Batts in Tubes
		3″	15″, 19″, 23″	Rolls, Batts in Rolls & Tubes
		2″	15″, 19″, 23″	Rolls, Batts in Rolls & Tubes
		1½″	15″, 19″, 23″	Rolls, Batts in Rolls & Tubes
attics sidewalls heated from unheated spaces floors over unheated areas dormers	attics	3″	15″, 23″	15″ — Rolls & Batts in Tubes 23″ — Rolls
		2″	15″, 23″	15″ — Rolls & Batts in Tubes 23″ — Rolls
attics sidewalls heated from unheated spaces floors over unheated areas dormers	attics	3″	15″, 19″, 23″	15″, 19″, 23″ — Rolls 15″, 23″ — Batts in Rolls 15″ — Batts in Tubes
		2″	15″, 19″, 23″	15″, 19″, 23″ — Rolls 15″, 23″ — Batts in Rolls 15″— Batts in Tubes
attics floors over unheated areas dormers	attics	May be poured to desired depth. 1 Bag covers 25 sq. ft. at 4″ thickness, horizontal application.		Bag
attics sidewalls heated from unheated spaces floors over unheated areas dormers	Same as new construction	Blown to full thickness of stud spaces, 3⅝″ in walls. May be blown to desired depth in ceilings and other areas. 1 Bag covers 42 sq. ft. 4″ thick horizontal open blown.		Bag

Perimeter	TYPE AE-6	Perimeter	1″, 1½″, 2″	SIZES 4″ x 36″, 12″ x 36″, 24″ x 36″
	TYPE PF-615	Perimeter	¾″, 1″, 1½″, 2″	12″ x 48″, 18″ x 48″, 24″ x 48″
	TYPE PF-615 (Paper-faced)	Perimeter	¾″, 1″, 1½″, 2″	12″ x 48″, 18″ x 48″, 24″ x 48″

The products shown on the above chart cover the basic forms only; some sizes made to meet special needs are not shown, and the chart is subject to minor modifications. Consult Fiberglas Branch Offices or local dealers if materials required are not listed.

PROPERTIES AND PERFORMANCE

Constant research and product development have resulted in improved Fiberglas Building Insulations . . . new products, new performance, new packaging. The latest type production equipment, first installed in an entirely new plant at Barrington, New Jersey, has been installed at our Newark, Ohio; Kansas City, Kansas, and Santa Clara, California; plants, to provide nationwide coverage.

Outstanding quality of the new insulation is its resiliency, or bounce. Compression packaged for economical warehousing, shipping and job-site handling, the new wool has assured recovery to more than its nominal thickness. When packages are opened the wool vigorously springs out . . . rolls, when opened, rapidly unroll themselves as the fibers regain their original light density. The process converts all of the glass into useful fiber; there is substantially no "shot", slugs or coarse fibers in the mass. The fibers bond together so well that no enclosing paper is required except where a foil-enclosed product is wanted for use in attic spaces.

THERMAL CONDUCTANCE

Because the true performance of any insulation is expressed by its conductance (thickness ÷ conductivity) and because the installed thickness of Fiberglas Building Insulation is its most distinguishing property, conductance values (as installed) for the various products are shown in the following chart. Note that the conductance values of air spaces are to be added; they are not, as with some insulation products, assumed as a part of the product value.

Thermal Conductance (C) of Improved Fiberglas Building Insulations (as installed)*

THICKNESS			CONDUCTANCE BTU (hour) (sq. ft.) (F.)
	6″	nominal	.05
Thick	3″	nominal	.09
Medium	2″	nominal	.14
Economy	1½″	nominal	.18

*Conductances do not include air spaces or the value contributed by foil-facings to such spaces or surface conductances. Values are subject to normal manufacturing and testing tolerances.

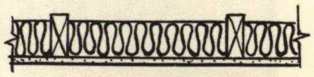
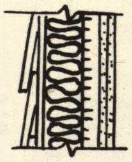
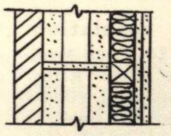
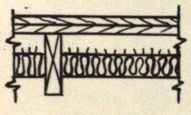
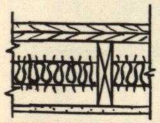
LIMITATIONS

Fiberglas Building Insulations of the types described herein are designed for use in wood frame construction where attachment can be made to wood studs, joists or furring strips. Attachment to metal studs or other supporting frame work may require special devices and application methods. While the vapor barrier provided on these materials is designed to have a permeance of one perm or less, application practices required by "dry wall" contractors call for application of the flanges to the sides of these framing members rather than over the faces. The resulting permeance of the entire wall thus depends upon care of application, tight fitting around openings such as pipes or electrical outlets and the leakage of moisture through the framing members themselves. In structures having plastered surfaces, recommended practice is to apply flanges over the edge surface of the framing members and to require maximum ventilation to remove construction moisture. Where "high moisture" occupancies are anticipated, the choice of exterior surfacing materials and provisions for venting the structure as well as the moisture-generating sources should be considered. The need for special vapor barrier treatment should be considered in extreme cases.

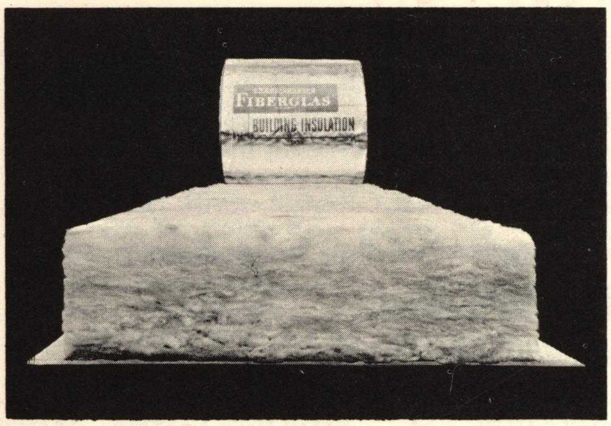
HEAT TRANSMISSION VALUES ("U")

The calculated heat loss through typical ceiling, wall and floor sections, when insulated with appropriate Fiberglas Building Insulations is shown below. These values represent typical performance under test conditions and are subject to normal manufacturing tolerances.

Thermal Values Contributed by Fiberglas Building Insulations to Typical Ceilings, Walls, Floors "U" Values in Btu/(hour) (sq. ft.) (F.)

LOCATION AND CONSTRUCTION	FIBERGLAS INSULATION TYPE AND THICKNESS	RESULTING THERMAL VALUES "U" VALUE	
		WINTER	SUMMER
CEILING **flat plastered, no flooring above** 	6″ Blowing Wool	0.046†	0.045†
	6″ Standard	0.046†	0.045†
	3″ Foil-Enclosed**	0.064	0.045
	3″ Foil-Faced**	0.067	0.054
	3″ Standard**	0.074	0.070
WALL		**ALL YEAR VALUE**	
 Frame, 25/32″ wood sheathing	3″ Foil-Faced***	0.063†	
	2″ Foil-Faced***	0.075	
	3″ Standard ***	0.073	
Frame, 25/32″ insulating board sheathing	3″ Foil-Faced***	0.059†	
	2″ Foil-Faced***	0.069	
	3″ Standard ***	0.068	
 Masonry, furred as needed, (4″ face brick on 4″ cinder block)	2″ Standard	0.10†	
	1½″ Standard	0.12	
	1″ Standard	0.15	
FLOOR (winter)			
 Frame, double wood floor, no ceiling, 1 air space	3″ Foil-Enclosed**	0.042†	
	2″ Foil-Faced**	0.062	
	2″ Standard**	0.085	
 Frame, double wood floor, finished ceiling, 2 air spaces	3″ Foil-Enclosed**	0.040†	
	2″ Foil-Faced**	0.059	
	2″ Standard**	0.075	

† Recommended thicknesses to assure minimum operating costs for heating and cooling.
** 1½" air space assumed.
*** ¾" air space assumed.

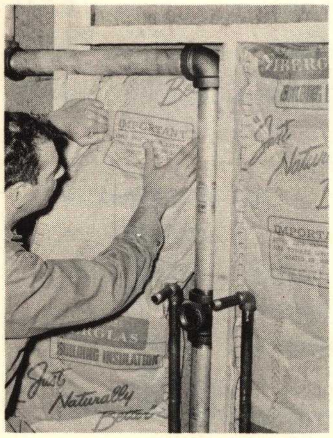


batts and roll blankets

Efficient Fiberglas Insulation is available with a vapor barrier on one face and a permeable backing on the other or with a vapor barrier on one face only. The nailing flange on the edges permits quick attachment to studs or joists. Inch markings along both edges of batts or blankets facilitate cutting. Widths for use where framing members are on 16″, 20″ or 24″ centers are available.

application

sidewalls

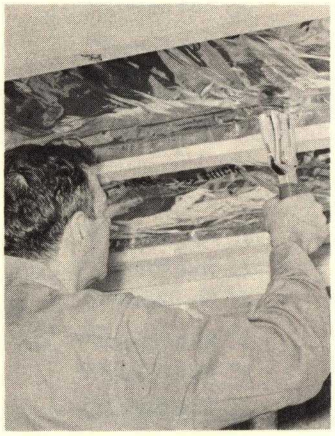


1. Cut insulation greater than stud height. A top and bottom flange is then provided by pressing insulation back from ends. Push the wool up against the top plate, keeping the vapor barrier toward the "warm-in-winter" side.

2. Insulate on cold side of pipes, drains, electric boxes and air ducts.

3. Fasten flanges to studs frequently enough to close gaps (fish mouths) between flange and stud. Install from top down and push the wool snugly against the bottom plate.

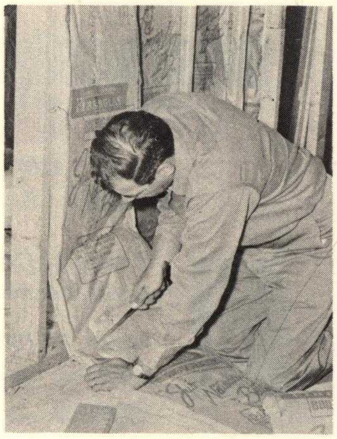
flat ceilings



1. For existing construction or installation after the ceiling has been applied—unroll blankets or lay batts between floor joists with vapor barrier face down. Leave flanges folded for a neater fit. In new construction, insulation may be applied from below before plaster base is attached, by fastening flanges to joists (as described in sidewall application).

2. Care should be taken to prevent the blocking of eave vents. Butt insulation tightly together at joints to gain maximum insulation value and minimum vapor travel.

finished attics



1. Fasten insulation from eave to knee wall on ceiling, up knee walls, along roof joists and across collar beams. Space should be left between insulation and roof sheathing and venting. Keep vapor barrier toward "warm-in-winter" side.

2. Provide louvres for venting spaces above insulation as a vapor control precaution and to remove summer heat.

blowing wool

Fiberglas Blowing Wool is manufactured so that it is suited to pneumatic installation. Fibers of glass are formed into small tufts to blow well, give good coverage and provide effective insulation.

uses

new buildings when:

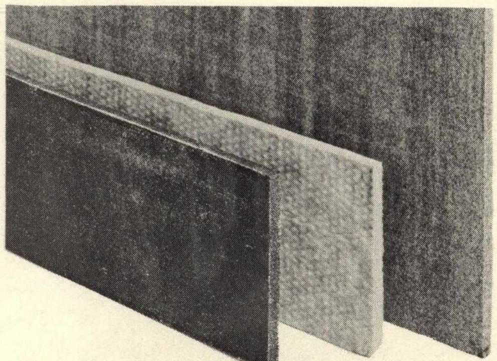
Working space is limited; spaces are to be insulated after they are enclosed; design considerations demand greater thicknesses than those available in batts or blankets.

existing buildings

application

Fiberglas Blowing Wool is applied only by dependable, approved Fiberglas Applicators. Skill and experience insure rapid application in strict compliance with design requirements and manufacturers recommendations.

perimeter insulation



Fiberglas Perimeter Insulations offer effective insulation for basementless homes of slab or crawl space type. Slab houses need insulation to assure warm, comfortable floors in winter and stop heat gain in summer. Fiberglas Perimeter Insulations meet requirements for checking heat losses and gains at edge of slab, the most critical portion, according to National Warm Air Heating and Air Conditioning Association.

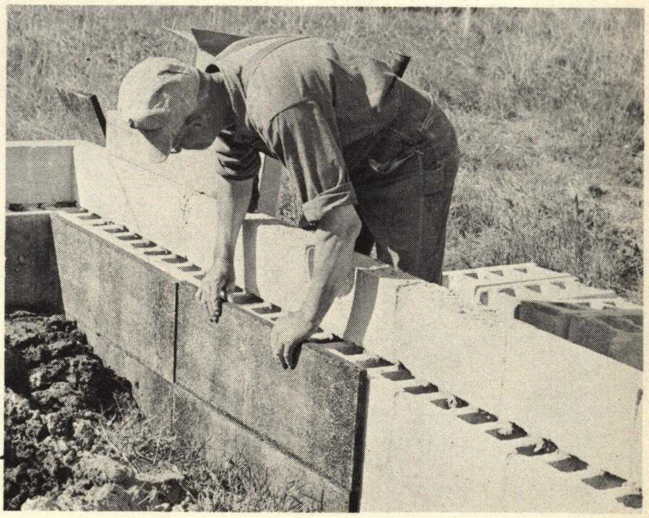
TYPE AE-6 — A rigid insulating core of Fiberglas Insulation completely enclosed in a protective asphalt sheath (this sheath is not designed as a watertight coating).

TYPE PF-615 — A low cost rigid Fiberglas board insulating material available with or without an adhered paper facing.

application

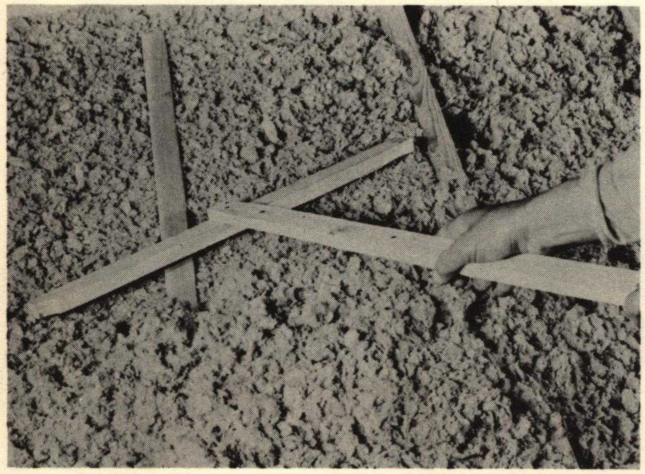
1. One vertical piece may be used or an "L-shaped" application made using vertical insulation along edge of slab and horizontal under edge.

2. Insulation may be adhered to outside of foundation in existing buildings. Cover with impact-resistant finish such as asbestos-cement board.



OWENS-CORNING
FIBERGLAS

pouring wool



Pouring Wool is Fiberglas insulation formed into small pellets which pour and rake easily. Large bags give approximately 20 sq. ft. coverage at 4″ thick. Coverage is greater than with most other pouring type products, up to 54% more per bag.

application

1. In unfloored attics, cut and lay asphalt coated paper or polyethylene film vapor barrier between joists, pour wool from bags to desired depth and level off as shown.
2. Vapor barrier may be omitted if attic is adequately vented.
3. Pouring wool is also ideal for hand packing narrow spaces around doors, windows, etc., to give continuous insulation.

Fiberglas Building Insulations are distributed nationally by:

TIGER BRANDS
division of BASIC INCORPORATED
HANNA BUILDING · CLEVELAND 15, OHIO · CHERRY 1-5000

OWENS-CORNING FIBERGLAS CORPORATION

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